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The Knowledge-based Resources of Venture Capital firms and Born Global firms' Internationalization

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Abstract

This study analyzes how venture capital firms' (VCs') value-added activities affect the speed and scope of the internationalization and growth of born global firms. The existing literature has gaps in terms of the resources that facilitate the development of born global firms and how VCs may contribute certain knowledge-based resources in this development. This study received a response rate of 26% to questionnaires sent to 593 VC-backed entrepreneurs in Sweden. The study complements the survey data with four years of annual report data and tests the relationship between VC value-added activities and the born global firms' speed and scope with multivariate statistics. The results show that while born global firms are prevalent among Swedish VC-backed firms, there is no significant evidence that VC firms contribute to their speed and scope of internationalization through their knowledge-based resources.

Keywords: born globals, internationalization, venture capital, growth, entrepreneurship, Sweden

Introduction

The concept of born global firms broadly refers to entrepreneurial firms that internationalize their operations at an early stage. Prior studies examine them in various ways, often with a pre-dominantly resource-based perspective on the firms' development and growth (Knight & Cavusgil, 2004; Oviatt & McDougall, 1994; Rialp, Rialp, & Knight, 2005). However, gaps in the existing literature still exist regarding how and from where a born global firm may acquire and assemble the necessary resources and capabilities to pursue rapid internationalization and growth (Keupp & Gassmann, 2009).

Venture capital (VC) is a key driver for creating value, economic growth, and renewal by adding value to entrepreneurial firms with high growth potential (Landström & Mason, 2012; Isaksson, 2006; Bygrave & Timmons, 1992). However, only a few studies analyze VCs role in facilitating entrepreneurial companies' internationalization (Fernhaber & McDougall-Covin, 2009; LiPuma et al., n.d.; Lutz & George, 2012), even though international market potential is often a part of the high-growth company's characteristics. The current literature also lacks research on the internationalization of born global firms in particular, for instance, on how born global firms' network partnership with VCs impact the firm's internationalization process in terms of knowledge-based resources gained from the VC partnership.

VC firms have the potential to add significantly more value to its portfolio firms (PFs) than the equity investment as such, including knowledge (Rosenstein, Bruno, Bygrave, & Taylor, 1993) and overall assistance with decision-making and strategy formulation (Maula et al., 2005; Rosenstein, Bruno, Bygrave, & Taylor, 1989). However, how and if such knowledge-based resources contribute to internationalization efforts, growth, and development of born global entrepreneurial firms deserves more attention.

This study's main contribution is the addition of new insights into the value that VCs add to born global firms. Given the gaps identified above, this study fills a clear void in the current research landscape, both in regard to VC and entrepreneurial finance, and in the field of international entrepreneurship. In the VC literature in particular, this study takes a demand-side perspective of VC research (Mason & Harrison, 1999) by looking at born global firms' perceived value of VC's knowledge-based resources. Additionally, much of the past research on born global firms generally uses qualitative, case-study based studies (Sapienza, Autio, George, & Zahra, 2006). Our study provides quantitative, survey-based information, to examine managerial practices and the international growth of born global firms in the interplay with VC partners on a larger scale. Lastly, this research also broadens the view of born global firms away from the narrow traditional focus on very young firms (Keupp & Gassmann, 2009; Jones, Coviello, & Tang, 2011); our sample includes born global firms that could be 10 years old or more, thus allowing a study of born global firms beyond the early internationalization efforts.

Literature Review and Hypotheses

Born global firms

Studies of rapidly internationalizing firms since the early 1990s challenge established paradigms in international business research that considers consider internationalization as slow, incremental, and only accomplished after firms are very established in their national home markets. Thus, prior international business research usually focuses on large, well-established multinational corporations and neglect newer, rapidly internationally growing firms (McDougall & Oviatt, 2000).

Researchers use different terms to describe these rapidly internationalizing firms, such as born global (Knight 1996), born international (Gabrielsson & Kirpalani, 2004), or international new ventures (Oviatt & McDougall, 1994), though most adopt Oviatt and McDougall's (1994, p. 50) broad definition: "*A business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of output in multiple countries*." Such firms include Google, Facebook, Apple, Blackberry phone brand creator Research In Motion from Canada (Gabrielsson, Kirpalani, Dimitratos, Solberg, & Zucchella, 2008), and the Spanish fashion retailer Zara (Bhardwaj, Eickman, & Runyan, 2011).

As McDougall and Oviatt's (1994) broad definition shows, research into born global firms mainly applies the resource-based view (Barney, 1991) as an analytical lens. One common aspect is how these often young and resource-scarce firms could augment their resource bases to facilitate early internationalization and growth. Thus, these studies highlight networking and an orientation towards inter-organizational relationships as important for born global firms because they seem to deliberately and proactively create, improve, and orchestrate their networks relationships to gain access to the needed complementary resources (Mu & Di Benedetto, 2011).

For example, born global firms create new business opportunities through coopetition (Bengtsson & Johansson, 2012), commercialize innovations and build capabilities through international partnerships (Knight & Cavusgil, 2004; Abrahamsson et al. 2015), and increase the speed of innovation through networking. Case studies on born global and other types of innovative firms point to a connection between learning from alliance and network partners and the firm's innovativeness and innovation speed. For instance, networking increases learning in the organization, which thus enhances innovation (Mort & Weerawardena, 2006; Salunke, Weerawardena, & McColl-Kennedy, 2011).

Born global firms and VCs

However, few studies investigate VC firms as network partners to born global firms in terms of the potential value they provide. Mäkelä and Maula's (2005) case study points out that partnerships with VC firms in the target country or countries for born global internationalization helps to legitimize the venture to that market by endorsement, thus reducing the liability of foreignness. Fernhaber and McDougall (2009) conducts a quantitative study on U.S.-based VC-funded born global firms and note that the intangible VC firm resources of reputation and knowledge-based resources contribute positively to internationalization. The authors use international sales intensity, international asset intensity, and international scope as a measurement of internationalization.

Furthermore, case-study evidence shows that VC firms' diverse resources, such as entrepreneurial experience, industry knowledge, and various network resources such as access to other investors, industry players, and executive recruitment, positively influence the scale of internationalization for born global firms (Lutz & George, 2012). In terms of value-added activities in general, past research indicates that both the financial and non-financial resources VC firms provide partly affect VC firm venture success. However, other venture-specific factors besides those brought in through the VC firm could explain this success. Conceptual research furthermore divides VC firms' potential non-financial knowledge-based resources into internal and external dimensions. The former refers to knowledge-based resources brought into activities such as recruiting of staff, developing strategies, management mentoring, consulting on or assisting with overall operations, and governance. The latter refers to the VC firm legitimizing the venture because their funding implies a signal of quality, and outreach to customers and other key stakeholders (Large & Muegge, 2008).

Large and Muegge (2008) note a contradiction in the research on the value adding effects of VC firm's post-investment activities. While many researchers find that VCs active involvement adds value to their investments (e.g., Gorman & Sahlman, 1989, MacMillan, Kulow, & Khoylian, 1989; Sapienza & Korsgaard, 1996), very few show empirically that it affects business performance. In fact, some studies that show a negative relationship between a high degree VC involvement and business performance (Fredriksen, Olofsson, & Wahlbin, 1997). One explanation may be that VCs tend to react only when they must (fire-fighters) (Fredriksen et al., 1997), indicating that VCs are more involved in the poorest performing companies in their portfolios. Manigart et al. (2002) examine the long-term effect of VC involvement by comparing the survival rate of 565 Belgian VC-backed companies and 565 comparable companies, and find that VC-backed companies do not have a higher probability of survival. This result contradicts the common wisdom that VCs add value in general. Manigart et al. (2002) conclude that VC funding from the right backer is probably better then receiving VC per se. This also supports findings from Jain and

Kini (1995) and Brau, Brown, and Osteryoung (2004). Join and Kina (1995) find that the quality of VC monitoring was positively related to post-issue IPO performance; that is, some VCs are better than others are at adding long-term value through governance.

Brau et al. (2004) compare the performance of 126 VC-backed firms post-IPO with a control sample of non-VC-backed firms and find no significant differences between them. However, a problem with empirically studying the effect of VCs' post-investment activities (e.g., monitoring) is to separate them from the effects of pre-investment activities (developing and shaping ideas, picking winners, skillful contracting, etc.) (Large & Muegge, 2008; Sapienza, 1992). Additionally, other effects are very hard to measure, for instance, the certification or legitimization effect of a financially strong investor. However, from a policy point of view, this might not be an issue. If VCs fill a gap in the capital market, and VC-backed firms grow and create employment, whether VCs are good investment analyst or good advisors and managers is unimportant.

One problem with studying the value adding effects of governance on business performance might be due to the methodological difficulties in measuring value-added and performance. For instance, it is difficult to separate the effect of skillful investment decisions and the effects of post-investment activities (governance) (Baum & Silverman, 2004). Furthermore, many studies simply investigate whether VCs perform activities beyond contributing capital, and assume that any additional activities add value. However, VCs may not contribute more than that of other active shareholders or outside board members (Gabrielsson & Huse, 2002; 2005). Additionally, traditional financial performance measures (e.g., profit, return on equity, or internal rate of return) are not that useful for young and fast-growing firms that might not be able to show a profit until, at the earliest, the very end of the VC investment cycle.

Thus, past research suggests that born global firms depend significantly on networking and various forms of inter-organizational collaborations and partnerships to facilitate swift and broad internationalization at an early age. VC firms could therefore be a beneficial partner for born globals because besides providing equity to the venture, they also often possess key non-financial knowledge-based resources to develop and grow the business. This notion has some support in previous research in the context of VCs and born global firms (Lutz & George, 2012; Mäkelä & Maula, 2005; Fernhaber & McDougall, 2009), despite the mixed evidence in more general contexts. Hence, the non-financial value-added (NFVA) from VC firms could increase the born global firm's internationalization speed and scope.

Furthermore, Sweden, Swedish VC firms, and Swedish born global companies comprises an interesting research context for two main reasons. First, Sweden is a small and open economy, and thus depends heavily on international trade. Entrepreneurial firms need to reach beyond their home market to scale sufficiently (e.g., Gabrielsson & Kirpalani, 2004). Second, the VC sector in Sweden has been quite active over the past decade; Sweden is second only to Silicon Valley in terms of VC-backed startups with a valuation over 1 billion US dollars, with 6.3 billion-dollar companies per million people (Davidson, 2015). Hence, we find it interesting to study the potential VC contribution, beyond equity funding, in developing Swedish startups, as startups from a country such as Sweden often need to internationalize to grow and to achieve subsequent high valuations.

We thus arrive at the following hypotheses on born global firms and the international value added by VC firms in Sweden steaming from their knowledge-based resources:

H1: Higher levels of VC international value added increases born global firms' internationalization speed.
H2: Higher levels of VC international value added increases born global firms' international scope.

Research Methodology

We study how VCs' value-added activities affect the speed and scope of the internationalization and growth of born global firms using a questionnaire. We generated an initial sample of 699 PFs by manually screening all VC firms in Sweden that were members of the Swedish Venture Capital Association (SVCA) and that listed their PFs on their homepage. Most SVCA members list their active investments, from which we identified the names, addresses, or webpages for the PFs. After the initial screening, we used the Affärsdata database to identify the organizational number of each firm. After this screening, we removed 106 inactive PFs (e.g., the company no longer exists, the VC already exited, or the VC did not finance the firm), leaving 593 active PCs. Using the organizational number, we collected the CEO's home addresses using another data deliverer, Ratsit. After two reminders, we received 153 responses, a response rate of 26 %.

An analysis (t-test) of non-respondents using annual report data (number of employees, turnover, and total book value of assets) did not reveal any indications that the respondents differed from the total sample. We also analyzed late responses, comparing responses on our first mail out with responses on our second reminder, and found no significant differences in our key dependent variables.

The vast majority of responding firms are small; for instance, about 37% of our respondents had fewer than 5 employees. However, this is in line with the nature of the VC industry (see, e.g., Isaksson, 2006). Table 1 gives further descriptive statistics on our sample.

Table 1. Descriptive statistics (annual report data) for the sample (153 firms)

Variable	Mean	Max	Min	Std. Deviation
Number of employees	34	1,075	0	102
Turnover (000 SEK)	59,772	2,175,807	0	198,078
Total assets (000 SEK)	45,289	1,111,842	0	108,623

Measures

Operationalizing born global firms

Prior studies use many different methods to operationalize export ratio in relation to time elapsed since firm inception to identify born global firms and international new ventures. Other metrics include start of international sales within two years (Knight 1996) after inception or having 75% international sales within 9 years after inception (Hashai & Almor, 2004). Halldin (2012) studied the operationalization of such firms in a Swedish context, concluding that studies could use a stringent definition of a 25% export ratio after three years since inception along with a modest

definition of a 10% export ratio in five years. In contrast, Gabrielsson et al. (2008) argue that all operationalization efforts carry built-in flaws because the metrics relevant for a certain firm are heavily influenced by the country of origin, the country's neighboring markets, and industry-specific factors.

Based on this ongoing debate and lack of clear consensus on operationalization in the literature, we adopt Halldin's (2012) "modest" definition of born global firms, an export ratio of 10% in five years, as our threshold for "emerging born globals." We thus capture firms who began international sales rapidly, but also those that may not have started as of yet, perhaps for industry-specific reasons, but that emerged internationally in terms of export ratio. However, that these firms have international sales early on implies an interest and orientation towards internationalization.

Furthermore, we also use an export ratio of 40% in five years as a cutoff to describe born global firms with more immersive international operations. Hence, we provide data on two different sets of born global firms, which we believe can account for industry-specific factors, as Gabrielsson et al. (2008) point out could delay international sales, such as long lead times for product development in biotechnology. As such, the questionnaire and the study adhere to relevant theoretical frameworks for born global firms, their operationalization, and internationalization.

Table 2. Summary of born global measures.

Measure	Operationalization
Export ratio 1	Estimate of current export ratio measured on a nine interval scale (0-10, 11-20… 91-100 %) for sales outside Sweden.
Export ratio 2	Estimate of export ratio five years after the company started, measured on the same interval as Export ratio 1.
Born Global	We use Export ratio 2 to categorize all firms as born global, except for firms younger than five years, for which we use Export ratio 1 (age of firm where measured in a separate question) Born Global Class 1: Between 10-39 % sales outside home market. Born Global Class 2: More than 40 % sales outside home market.
Scope of internationalization	Respondents indicate the international markets in which they are presently active, providing the number of geographical markets.
Scope Grouping	Low Scope: Firms present in less than three markets outside Sweden. High Scope: Firms present in three or more markets.

Operationalizing NFVA

We adopt several different measures to capture both the more general VCs NFVA and the more specific international NFVA (INFVA). Overall, we measure the contribution as the

entrepreneur's perception of the VCs contribution, which is a common measure of NFVA (Large & Muegge, 2008).

For the first NFVA measure, we a nine-item Likert scale where we asked respondents to estimate the degree that they perceived that the VC contributed to their firm's development on a scale from 1 to 6 (see Table 5 for item descriptions). Prior studies tested these items for the Swedish VC market (Isaksson, 1999) and we developed them from previous research on VC NFVA (Fried & Hisrich, 1995; Gorman & Sahlman, 1989; Sapienza, 1992).

In a second NFVA measure, we asked respondents to estimate if they perceived that the VC contributed valuable expertise to the company's development on a scale 1 to 6. We use this second measure as a more general measure of NFVA and to control for items the first measure does not cover.

We use a five-item Likert scale (1-6) question as a measure of INFVA in which we asked respondents to estimate the value of VCs NFVA activities related specifically to internationalization:

- Access to international customer and supplier networks,
- Better internal routines and processes,
- Recruitment of key personnel,
- Increased international certification, and
- Strategic decisions in the board of directors.

Results

Speed of internationalization

We first survey firms' export ratio to identify born global firms. In one question, we asked respondents to estimate their current export ratio, and in another question, to estimate their export ratio five years post-start up. For firms younger than five years, we use the answer for the first question, and for the other firms, we use the answer for the second question. Of the sample, 13 firms (approximately 10 %) were younger than five years, and we hence use their current export ratio. Table 3 reports the frequency of distribution for our merged export ratio measure.

Table 3. Frequency distribution of export ratio five years post-start or at present for firms younger than five years of age.

		Frequency	%	Valid %	Cumulative %
Valid	0-10%	60	38.5	42.0	42.0
	11-20%	13	8.3	9.1	51.0
	21-30%	6	3.8	4.2	55.2
	31-40%	7	4.5	4.9	60.1
	41-50%	7	4.5	4.9	65.0
	51-60%	8	5.1	5.6	70.6
	61-80%	10	6.4	7.0	77.6
	81-90%	12	7.7	8.4	86.0
	91-100%	20	12.8	14.0	100.0
	Total	143	91.7	100.0	
Missing	System	13	8.3		
Total		156	100.0		

Table 2 shows that many VC-financed firms have international operations. In our sample, 68% have an international sales quota higher than 10 % within five years from inception (i.e., are born global firms). For comparison, research on Swedish born global firms shows that they constitute 2-3% of all new ventures in Sweden between 1998-2003 using the same measure (Halldin, 2012). Thus, born global firms do seem acutely more prevalent among VC-funded firms than in the general population of new ventures in Sweden.

Scope of internationalization

We measure the scope of internationalization by the number of geographical markets in which the firm is present. Table 4 summarizes the percentage of each market.

Table 4. Respondents' presence by region in descending order by percentage indicating their presence in the region.

Region	Total	Present	Not present	% Present
Nordic countries	156	110	46	71%
Europe	156	98	58	63%
Asia	156	61	95	39%
North America	156	57	99	37%
South America	156	23	133	15%
Oceania	156	22	134	14%
Africa	156	16	140	10%

As Table 3 shows, Nordic countries followed by other European markets are by far the largest export markets for our sample firms, with 71% and 63% of firms, respectively, in these markets. Interestingly, 34% and 36% export to North America and Asia, respectively. As the average Swedish exporter rarely ventures outside of Europe (Tillväxtverket, 2011), born global firms could be seen has having a broader international scope than the average Swedish exporting firm.

To measure the scope of internationalization, we follow Fernhaber and McDougall (2009) and count the total number of geographical markets by region, that is, Europe, North America, Asia, and so forth.

Table 5. Scope of internationalization of VC-financed firms (number of markets the firm is present in).

Scope	Frequency	%	Valid %	Cumulative %
0	30	19.2	19.2	19.2
1	29	18.6	18.6	37.8
2	27	17.3	17.3	55.1
3	23	14.7	14.7	69.9
4	21	13.5	13.5	83.3
5	12	7.7	7.7	91.0
6	7	4.5	4.5	95.5
7	7	4.5	4.5	100
Total	156	100	100	

Close to 81% of all firms in our sample are active in at least one market outside Sweden, and approximately 45% are active in three different markets or more. We examine whether born global firms have a significantly higher international scope by comparing the mean scope for born global firms with the rest of the firms. We divided born global firms in two groups: BG_CLASS1 (more than 10% international sales) and BG_CLASS2 (more than 40% international sales). From Table 3, it is clear that born global firms also have a much higher international scope than non BG

firms do. Additionally, the BG_CLASS2 group has a higher scope than BG_CLASS1 does. While the average non-born global firm has a scope of 1.4 (active in little more than one market), born global firms are active in close to four markets on average.

Table 6. Difference in international scope between VC-financed firms.

Group	Mean	Std. Deviation
Not BG	1.4	1.5
BG_CLASS1	3.6	1.7
BG_CLASS2	4.0	1.7

To conclude the first part of our analysis of the speed and scope of VC-financed firms, our results show that that VC-financed Swedish firms are born global both in speed and scope than Swedish firms in general. In line with Large and Muegge's (2008) notion of venture success, this does not answer whether the born global firm's success (in internationalization speed and scope) is due to VC firms' value added activities or other characteristics inherent in the venture. Thus, the key question follows: To what degree do VCs contribute to the speed and scope of these firms' internationalization? Is this only a matter of investment selection (i.e., that VCs select firms with born global potential) or do VCs also contribute to their internationalization efforts?

Venture NFVA activities

For our first measure of NFVA, we asked respondents to estimate to their perceived value of VCs' contribution to nine different areas.

Table 7. Perception of VC NFVA activities (1, no importance; 6, very important).

Area	**Mean**	**Std. Deviation**	**% High (5 0r 6)**
Advice on financial matters	3.72	1.50	35%
Sounding board for ideas	3.41	1.46	25%
Contacts and networks	3.26	1.39	20%
Strategic management	3.19	1.52	23%
Marketing skills	2.51	1.33	8%
International competence	2.47	1.43	12%
Recruitment of key personnel	2.37	1.34	10%

R&D and technological development	1.80	1.02	1%
Product expertise	1.77	0.98	1%

Table 5 indicates that CEOs of VC-backed firms value advice on financial matters the most. Note however that while this is the highest valued area, only 35% of respondents gave this contribution a high (5 or 6) ranking. Additionally, 12% perceived that international competence as a highly valued contribution, ranking it number six among the nine areas with an average score of 2.47 (i.e., on the lower side of the six degree scale).

We use a more general one-item question "To what degree to you perceive that the VC brings valuable expertise to the development of the company?" as an overall measure of NFVA. Table 6 provides the results for this question.

Table 8. Responses to "To what degree to you perceive that the VC brings valuable expertise to the development of the company?"

Response	Valid %	Cumulative %
Not at all (1)	13,1	13,1
2	15,9	29,0
3	15,2	44,1
4	27,6	71,7
5	16,6	88,3
to a very high degree (6)	11,7	100,0

Approximately 28% of respondents thought that the VC contributed to the firms' development (5 or 6) to a high degree. Furthermore, approximately 29% perceive that VCs provided a very limited or even non-existent contribution (1 or 2 on the scale).

We measure VCs' INFVA with a set of questions asking respondents to estimate the degree to which the VC supported the firm's internationalization on a six-point scale from (1) very low importance to (6) very high importance. Table 7 summarizes the mean scores for the sample (total, BG_CLASS1, and BG_CLASS2).

Table 9. Mean score of INFVA and percent of (BG_CLASS2) respondents that perceived INFVA as an important support for the firm's internationalization.

Activity	Mean score	% High (5 or 6)
Strategic decisions in board of directors	3,2	20,5
Increased international certification	2,4	11,5
Recruitment of key personnel	2,0	5,8
Better internal routines and processes	2,2	4,5
Access to international customer and supplier networks	1,8	3,8

Table 7 clearly shows that VCs' most important contribution to internationalization is through the board of directors, as approximately 28% of respondents gave this contribution a high

rating, followed by increased international legitimization, with approximately 14% perceiving this contribution as valuable. These numbers indicate that 1) most VC-financed born global firms do not perceive that the VC contributed significantly to their internationalization; and 2) the recognized contributions are more of a hands-off strategic sort than a hands-on operational sort. That is, VCs do not contribute to born global firms through active involvement in the internationalization process, but act as a sounding board in the board of directors and by giving certification to the firm in their international contacts.

Linking INFVA to speed and scope

This study's main purpose is to investigate if VC firms' INFVA contributes to the speed and scope of their PFs' internationalization process. We first create a joint measure of INFVA by calculating the average of our five measures of INFVA (Table 7) after a factor analysis (Principal Component Analysis, see Appendix 1) found that all items loaded on one factor and the reliability analysis yielded a Cronbach's Alpha of .851 (see the appendix for more detail).

To investigate if higher levels of INFVA increase the internationalization speed of VC-financed firms, we perform a bivariate correlation analysis of INFVA and Export ratio (for all firms with an export ratio above 10%). This test yielded a non-significant (p = .707) Pearson Correlation close to zero (.044). Second, we test for mean differences between BG_CLASS2 and the rest of the sample of all firms with more than 10% international sales. That is, we investigate whether VCs need to contribute more INFVA to more internationalized firms than to those with a lower degree of internationalization (BG_CLASS1).

Table 10. Mean difference in INFVA between low and high export intensive born global firms.

Export ratio	N	Mean	Std. Deviation	Std. Error Mean
41-100 %	51	2.54	1.28	.18
11-40 %	24	2.13	.92	.19

Note: This test was only performed on firms with an export ratio of more than 10 %.

There is a slight difference in INFVA between high export intensive born global firms and born global firms with lower export intensity. High export intensive born global firms have a higher perceived INFVA than low export intensive born global firms do. However, the difference is quite small, with a significance level of .117 (not significant). Hence, this test does not support our hypothesis that VC firms' INFVA increases the speed of internationalization for VC-financed firms.

We investigate whether VCs' INFVA increases the scope of a firm's internationalization by testing whether a higher INFVA was associated with an increase in scope. A bivariate

correlation analysis of INFVA and SCOPE gave a non-significant (.610) Pearson Correlation close to zero (-0,060). We also divide the born global sample (i.e., all firms with a more than 10 % export ratio) into two equal groups (with a cut point of 4 or more markets for the group with highest scope) and compare the means. Table 7 reports the results.

Table 11. Mean difference in INFVA between low and high scope firms.

SCOPE	N	Mean	Std. Deviation	Std. Error Mean
>= 4	37	2.47	1.27	.21
< 4	38	2.34	1.11	.18

Table 7 shows the slight difference in INFVA between high and low scope firms. Firms with a higher international scope do perceive a slightly higher INFVA than firms with a lower international scope do. However, as with international speed, the difference is very small and not significant (p =.644). Hence, our analysis does not support our hypothesis that VCs' INFVA increase firms' international scope.

Discussion and Conclusion

This study examines the role of VCs' INFVA in the internationalization of born global firms in Sweden and thus helps explain the potential role of VC firms in the growth and development of born global firms. Past research (Fernhaber & McDougall, 2009; Lutz & George, 2012; Mäkelä & Maula, 2005) hints that VC firms have an overall positive impact for this type of firm. Our results indicate that Swedish VC-financed firms are much more likely to be born global than the average young venture in Sweden. Furthermore, Swedish VC-financed born global firms seem to have a broader scope in terms of geographical export markets than the average Swedish exporting firm and VC-financed non-born global firm. As such, there is a connection in terms of VC involvement in the born global firm and its success in internationalization speed and scope, which is in line with theory in the field. However, Large and Muegge (2008) point out, this success may not be due to VC firms' NFVA.

Subsequently, our hypotheses that VC firm's INFVA contributes positively to internationalization speed and scope did not yield significant statistical support in our sample. This possibly contradicts past research on VCs and born global firms in part. As there is a consensus in born global research that these firms are highly dependent on augmenting its resource base through inter-organizational collaborations (Mu & Di Benedetto, 2011; Salunke et al., 2011), Swedish born global firms could value various other types of collaboration more for their development than those with VC partners. Furthermore, the internal competence of Swedish born global firms in internationalization might already be high enough to offset the need for significant contributions from VC firms. This study also supports the notion in past research that VC firms are skilled in picking "winners" (e.g., born global firms) with a high inherent potential for success (Baum & Silverman, 2004), but might lack NFVA contributions to significantly develop their PFs through those means.

Based on this discussion, this study opens up many fruitful avenues for continuing research on VC firms' NFVA and the development of born global firms. A cross-country and industry

breakdown and comparisons might yield a more in-depth picture of the value of INFVA for born global firm internationalization in certain contexts. More qualitative research of the specific value of INFVA elements and how they might influence the born global firm could also be beneficial. How VC firms' orchestrate their INFVA resources and capabilities and how they decide to utilize them in their PFs also deserves further attention, which is possible through either qualitative or quantitative methods.

This study also has relevant implications for VC firm managers, as they could likely need to further develop their INFVA capabilities to play a more effective and pro-active role in developing their born global PFs, which in turn could lead to more successful exists in the long-term. Furthermore, in accordance with Rosenstein et al. (1993), strong value adding capabilities for developing young PFs could differentiate them from their VC competitors, thus adding further incentive for them to develop these capabilities.

In terms of policy implications, the study supports the idea that entrepreneurs do not primarily use private VCs to internationalize. Instead, they can develop the skills and capabilities required for internationalization through other means, which can for instance be incubator and accelerator programs, which focus on startup business development rather than equity investments. As such, this study suggests that continued and increased public support for incubators and accelerators could be a more fruitful avenue to achieve startup internationalization and born globals, rather than policy support for VCs.

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Appendix 1. Creating International Non-Financial Value-added (INFVA) index
Correlations between INFVA measures

INFVA-variable	**1**	**2**	**3**	**4**	**5**
1. Strategic decisions in board of directors	1	,395**	,400**	,527**	,589**
2 Access to international customer and supplier networks	,395**	1	,731**	,534**	,562**
3. Increased international certification	,400**	,731**	1	,544**	,489**
4. Recruitment of key personal	,527**	,534**	,544**	1	,735**
5. Better internal routines and processes	,589**	,562**	,489**	,735**	1

** Correlation significant at the 0.01 level (2-tailed).
Comments: All items are significantly (positive) correlated.

Factor analysis of International Non-Financial Value-added (INFVA) measures

Communalities	Initial	Extraction
Better internal routines and processes	1	0,722
Recruitment of key personal	1	0,709
Increased international certification	1	0,610
Access to international customer and supplier networks	1	0,577
Strategic decisions in board of directors	1	0,515

Extraction Method: Principal Component Analysis.
Comment: All items load on the same factor.

Reliability analysis of International Non-Financial Value added (INFVA) measures
Cronbach's Alpha: .851 (5 items).

Descriptive statistics: INFVA measure

	N	Minimum	Maximum	Mean	Std. Deviation
INFVA	75	1	6	2,41	1,19

Note: The correlations, factor analysis and reliability analysis use BG_CLASS2 (N = 50) to test the strongest form of BG. Descriptive statistics refer to BG_CLASS1.